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(71)Applicant : MINOLTA CO LTD

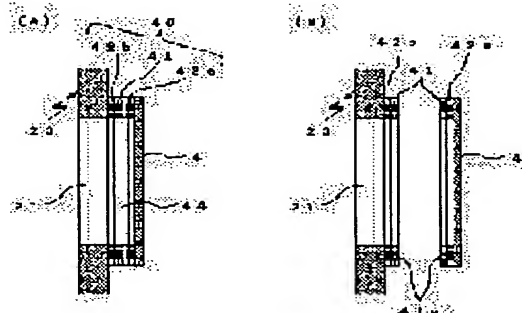
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(72)Inventor : NAKAO KOSHIRO

(54) PRESSURE SENSITIVE ADHESIVE DOUBLE COATED TAPE AND SEALING STRUCTURE FOR DEVELOPER SUPPLY CONTAINER**(57)Abstract:**

PROBLEM TO BE SOLVED: To easily attach a film material by closing a supply port at a developer supply container.

SOLUTION: A pressure sensitive adhesive double coated tape 40 wherein a base material 41 separated to both adhesive layer sides along faces of adhesive layers is provided between the adhesive layers 41a, 42b provided on both faces is pasted around a supply port 21 of a developer supply container 20 by the adhesive layer on one of its faces, while the supply port 21 is closed to have a film material 4 adhered to the other face of the double coated tape 40. In addition, an adhesive face of one of the faces of the double coated tape having both faces as adhesive faces is pasted around the supply port 21, while the film material 4 is peelably attached to the other adhesive face of the double coated face so that the supply port 21 may be closed.

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CLAIMS

[Claim(s)]

[Claim 1] Color picture formation equipment characterized by providing the following Two or more process units which contain a toner of a color with which each differs, and have a photo conductor and a development means at least, and were arranged in the shape of an annulus ring as a whole A migration means to rotate said two or more process units in one, and to move each process unit to a predetermined image formation location one by one A toner hopper with which it has a synthetic means to compound a color image for a toner image of a color which is different on said photo conductor in said image formation location in piles, and said development means collects toners A toner maintenance means to always hold a toner of the specified quantity to a toner feed zone said whose development means it is color picture formation equipment which has at least toner support which moves the toner to said photo conductor while supporting a toner and rotating, and a toner supply means to supply a toner to said toner support, and is near the contiguity section of said toner support and said toner supply means further

[Claim 2] Two or more process units which contain a toner of a color with which each differs, and have a photo conductor and a development means at least, and were arranged in the shape of an annulus ring as a whole, A migration means to rotate said two or more process units in one, and to move each process unit to a predetermined image formation location one by one, A toner hopper with which it has a synthetic means to compound a color image for a toner image of a color which is different on said photo conductor in said image formation location in piles, and said development means collects toners, Toner support which moves the toner to said photo conductor while supporting a toner and rotating, It is color picture formation equipment which has at least a toner supply means to supply a toner to said toner support. So that a toner of a toner feed zone which it is near the contiguity section of said toner support and said supply means may not return during revolution actuation of said process unit by said migration means at said toner hopper Color picture formation equipment characterized by intercepting a part of opening which leads to a toner receipt room of said toner hopper from said toner feed zone.

[Claim 3] Color picture formation equipment according to claim 2 with which a toner maintenance wall was prepared in said toner hold wall so that a toner feed zone might be formed with the outer wall section and a toner hold wall of a toner hopper and a part of opening which leads to a toner receipt room of said toner hopper from said toner feed zone might be intercepted.

[Claim 4] Two or more process units which contain a toner of a color with which each differs, and have a photo conductor and a development means at least, and were arranged in the shape of an annulus ring as a whole, A migration means to rotate said two or more process units in one, and to move each process unit to a predetermined image formation location one by one, A toner hopper with which it has a synthetic means to compound a color image for a toner image of a color which is different on said photo conductor in said image formation location in piles, and said development means collects toners, Toner support which moves the toner to said photo conductor while supporting a toner and rotating, [when it has further an accumulation means to be color picture formation equipment which has at least a toner supply means to supply a toner

to said toner support, and to accumulate printing number of sheets of a monochrome image and carries out continuation formation of the monochrome image] It is color picture formation equipment characterized by carrying out the predetermined angle revolution of said process unit from after printing termination before the next printing initiation when accumulation number of sheets of said accumulation means comes during printing more than predetermined number of sheets A.

[Claim 5] Furthermore, it is color picture formation equipment according to claim 4 which was made to perform the remaining printing once carrying out the predetermined angle revolution of the process unit, when accumulation number of sheets of an accumulation means turns into predetermined number of sheets B ($B > A$) during printing.

[Claim 6] Color picture formation equipment according to claim 4 or 5 which resets accumulation number of sheets of an accumulation means at the same time it carries out the predetermined angle revolution of the process unit.

[Claim 7] Color picture formation equipment according to claim 4 which enabled it to set up a value of A freely.

[Claim 8] Color picture formation equipment according to claim 5 which enabled it to set up a value of B freely.

[Claim 9] A process unit characterized by providing the following A toner hopper with which it has a photo conductor and a development means at least, and is equipped possible [a rotation] in color picture formation equipment, and said development means collects toners while containing a toner Toner support which moves the toner to said photo conductor while supporting a toner and rotating A toner maintenance means to always hold a toner of the specified quantity to a toner feed zone said whose development means it is the process unit which has at least a toner supply means to supply a toner to said toner support, and is near the contiguity section of said toner support and said toner supply means further

[Claim 10] A toner hopper with which it has a photo conductor and a development means at least, and is equipped possible [a rotation] in color picture formation equipment, and said development means collects toners while containing a toner, Toner support which moves the toner to said photo conductor while supporting a toner and rotating, It is the process unit which has at least a toner supply means to supply a toner to said toner support. rotational motion — a process unit characterized by intercepting a part of opening which leads to a toner receipt room of said toner hopper from said toner feed zone so that a toner of a toner feed zone which it is near the contiguity section of said toner support and said supply means may not return to said toner hopper in appearance in the work.

[Claim 11] Color picture formation equipment according to claim 10 with which a toner maintenance wall was prepared in said toner hold wall so that a toner feed zone might be formed with the outer wall section and a toner hold wall of a toner hopper and a part of opening which leads to a toner receipt room of said toner hopper from said toner feed zone might be intercepted.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] This invention relates to the process unit used for the color picture formation equipment and it applicable to a color printer, a color copying machine, or color facsimile which are color electrophotography equipment.

[0002]

[Description of the Prior Art] Generally the method of facing forming a color picture, piling up yellow, a Magenta, cyanogen, and the toner image of each color of black on imprint material with electrophotography, and forming a color picture is used. Thus, as color electrophotography equipment which piles up the toner image of each color and outputs a color picture, various kinds of equipments are proposed by current. For example, the color electrophotography equipment of an unprecedented new configuration is indicated by JP,7-36246,A. Hereafter, this color ***** is explained about **, referring to drawing 7 . Drawing 7 is the sectional side elevation showing the whole color electrophotography equipment configuration indicated by the above-mentioned official report.

[0003] As shown in drawing 7 , 4 sets of this color electrophotography equipment whose cross sections for each colors of black, yellow, a Magenta, and cyanogen are sector image formation units in a center mostly of process-unit 101Bk(s), and 101Y, 101M and 101C are arranged, and the process-unit group is constituted by these process-unit 101Bk(s), and 101Y, 101M and 101C. Two or more process-unit 101Bk(s), and 101Y, 101M and 101C are arranged in the shape of a circular ring. each — process-unit 101Bk, and 101Y, 101M and 101C are equipped with the configuration members of a photo conductor, the development counter which contained the toner of each color, and a cleaner main [three].

[0004] Process-unit 101Bk arranged in the shape of a circular ring, and 101Y, 101M and 101C are supported by the base material (not shown), and can be rotated in the direction of arrow head X around the cylinder-like shaft 122. each — one by one, a photo conductor moves to the image formation location 150 which counteracted the middle imprint belt 132, and process-unit 101Bk, and 101Y, 101M and 101C are positioned. This image formation location 150 is also an exposure location where the signal light 105 exposes a photo conductor.

[0005] The laser aligner 123 generates the signal light 105 which is the laser beam modulated by the signal inputted into the printer section. In the condition which showed in drawing 7 , this signal light 105 passes the optical path formed between process-unit 101Y for yellow, and process-unit 101M for Magentas, and it carries out incidence to the mirror 124 fixed to the interior of a shaft 122 through the aperture of the transparence by which the opening was carried out to some shafts 122. The signal light 105 reflected by the mirror 124 is irradiated by the photo conductor of process-unit 101Bk for blacks in the image formation location 150. Thereby, a latent image is formed in the photo conductor of process-unit 101Bk.

[0006] The middle imprint belt 132 is constituted by the film which used as the base material the urethane of half-conductivity of the shape of an endless belt whose thickness is 100 micrometers. This middle imprint belt 132 is ****(ed) by the imprint roller 133 and the roller 134 made from stainless steel, and is movable in the direction of arrow head Y. The urethane foam to

which low resistance processing was performed is formed in the external surface of the imprint roller 133.

[0007] The pressure welding of the imprint roller 133 is lightly carried out to the photo conductor of process-unit 101Bk for blacks which is in the image formation location 150 through the middle imprint belt 132. the near roller 134 — the 2nd imprint roller 135 — a follower — it is prepared pivotable and the pressure welding of this 2nd imprint roller 135 is lightly carried out to the middle imprint belt 132.

[0008] The form conveyance way is formed in the nip section in which the middle imprint belt 132 and the 2nd imprint roller 135 are carrying out the pressure welding so that a form may be sent from the feed section 136.

[0009] The fixing assembly 144 is arranged at the downstream of the form sent from the nip section of the middle imprint belt 132 and the 2nd imprint roller 135, and this fixing assembly 144 is fixed to the toner image on the form after an imprint.

[0010] Next, the actuation at the time of the color image formation in the above-mentioned conventional color electrophotography equipment is explained.

[0011] an initial state — setting — each — process-unit 101Bk, and 101Y, 101M and 101C are arranged in the location as shown in drawing 5. That is, process-unit 101Bk for blacks is arranged in the image formation location 150, and is in the condition that the photo conductor of process-unit 101Bk countered some middle imprint belts 132. In this condition, incidence of the signal light 105 for blacks is carried out to process-unit 101Bk from the laser aligner 123, and image formation by the black toner is performed on a photo conductor.

[0012] When the toner image of black is formed on a photo conductor as mentioned above, the toner image of black is imprinted also on the middle imprint belt 132. Immediately after all the toner images of black were imprinted by the middle imprint belt 132, the 90 degrees of the whole process-unit group rotate in the direction of arrow head X of drawing 5 in one. And process-unit 101C for cyanogen stops in the image formation location 150, and the photo conductor of process-unit 101C is positioned.

[0013] After process-unit 101C for cyanogen is positioned as mentioned above in the image formation location 150, like process-unit 101Bk for the above-mentioned blacks, incidence of the signal light 105 for cyanogen is carried out to process-unit 101C, and the toner image of cyanogen is formed on a photo conductor, and is imprinted by the middle imprint belt 132. Thus, when the toner image of cyanogen is imprinted by the middle imprint belt 132, the middle imprint belt 132 is controlled to rotate one and to be arranged so that the toner image of the black imprinted before serves as a toner image of cyanogen, and a corresponding location.

[0014] The same imprint actuation as the above is performed one by one also about the following Magenta and yellow, on the middle imprint belt 132, the toner image of four colors agrees in location, it piles up, and a color image is formed. After the toner image of the last yellow is imprinted on the middle imprint belt 132, the package imprint of the color image with which four colors lapped is carried out with the 2nd imprint roller 135 at the form sent from the feed section 136 according to the formation timing of the color image. And a fixing assembly 144 is fixed to the color image imprinted by the form.

[0015]

[Problem(s) to be Solved by the Invention] However, there were the following problems in the color picture formation equipment which is conventional color electrophotography equipment constituted as mentioned above.

[0016] First, after printing several many sheets under a high-humidity/temperature environment, electrification of a toner became unstable, and the orientation which concentration unevenness and fogging tend to generate was suited.

[0017] Moreover, in monochrome continuation printing, the remaining printing was performed, after being in the middle of printing, once suspending printing actuation and rotating a process unit for supply of a toner, when it becomes more than predetermined number of sheets. for this reason — the case where the time amount which an actual image output takes is long, and monochrome printing is performed especially continuously intermittently — few, in spite of the output of several sheets, it is in the middle of printing, and that a process unit rotates had

occurred. And the unsteady actuation in the middle of such printing had given stress to those who wait for an output.

[0018] This invention is made in order to solve said technical problem in the conventional technology, and it aims at offering the process unit used for the outstanding color picture formation equipment and this outstanding which neither concentration unevenness nor fogging generates after several multi-sheet printing under a high-humidity/temperature environment.

[0019] Moreover, this invention aims at offering the outstanding color picture formation equipment which can output an image in a short time in monochrome continuation printing, without starting the short supply of a toner.

[0020]

[Means for Solving the Problem] In order to attain said purpose, the 1st configuration of color picture formation equipment concerning this invention Two or more process units which contain a toner of a color with which each differs, and have a photo conductor and a development means at least, and were arranged in the shape of a circular ring as a whole, A migration means to rotate said two or more process units in one, and to move each process unit to a predetermined image formation location one by one, A toner hopper with which it has a synthetic means to compound a color image for a toner image of a color which is different on said photo conductor in said image formation location in piles, and said development means collects toners, Toner support which moves the toner to said photo conductor while supporting a toner and rotating, It is color picture formation equipment which has at least a toner supply means to supply a toner to said toner support. Said development means is characterized by equipping a toner feed zone which it is near the contiguity section of said toner support and said toner supply means further with a toner maintenance means to always hold a toner of the specified quantity. It can always hold to a toner feed zone, without returning a toner near the toner supply means charged comparatively to a toner receipt room of a toner hopper in rotation actuation of a process unit according to the 1st configuration of this color picture formation equipment. Therefore, also in a high-humidity/temperature environment, electrification of a toner is stabilized after several multi-sheet printing, and a beautiful image generated [fogging / neither / concentration unevenness nor] is obtained.

[0021] Moreover, the 2nd configuration of color picture formation equipment concerning this invention Two or more process units which contain a toner of a color with which each differs, and have a photo conductor and a development means at least, and were arranged in the shape of a circular ring as a whole, A migration means to rotate said two or more process units in one, and to move each process unit to a predetermined image formation location one by one, A toner hopper with which it has a synthetic means to compound a color image for a toner image of a color which is different on said photo conductor in said image formation location in piles, and said development means collects toners, Toner support which moves the toner to said photo conductor while supporting a toner and rotating, It is color picture formation equipment which has at least a toner supply means to supply a toner to said toner support. So that a toner of a toner feed zone which it is near the contiguity section of said toner support and said supply means may not return during rotation actuation of said process unit by said migration means at said toner hopper It is characterized by intercepting a part of opening which leads to a toner receipt room of said toner hopper from said toner feed zone. It can always hold to a toner feed zone, without returning a toner near the toner supply means comparatively charged in rotation actuation of a process unit by the easy configuration to a toner receipt room of a toner hopper according to the 2nd configuration of this color picture formation equipment.

[0022] Moreover, in the 2nd configuration of color picture formation equipment of said this invention, it is desirable that a toner maintenance wall is prepared in said toner hold wall so that a toner feed zone may be formed with the outer wall section and a toner hold wall of a toner hopper and a part of opening which leads to a toner receipt room of said toner hopper from said toner feed zone may be intercepted.

[0023] Moreover, the 3rd configuration of color picture formation equipment concerning this invention Two or more process units which contain a toner of a color with which each differs, and have a photo conductor and a development means at least, and were arranged in the shape

of a circular ring as a whole, A migration means to rotate said two or more process units in one, and to move each process unit to a predetermined image formation location one by one, A toner hopper with which it has a synthetic means to compound a color image for a toner image of a color which is different on said photo conductor in said image formation location in piles, and said development means collects toners, Toner support which moves the toner to said photo conductor while supporting a toner and rotating, [when it has further an accumulation means to be color picture formation equipment which has at least a toner supply means to supply a toner to said toner support, and to accumulate printing number of sheets of a monochrome image and carries out continuation formation of the monochrome image] When accumulation number of sheets of said accumulation means comes during printing more than the predetermined number of sheets A, it is characterized by carrying out predetermined angle rotation of said process unit from after printing termination before the next printing initiation. according to the 3rd configuration of this color picture formation equipment — monochrome continuation printing — setting — few — it is in the middle of printing of several sheets, and without interrupting printing, the amount of toners of the toner supply means circumference can be maintained appropriately, and gas supply pressure failure of a toner can be prevented.

[0024] Moreover, in the 3rd configuration of color picture formation equipment of said this invention, when accumulation number of sheets of an accumulation means turns into the predetermined number of sheets B ($B > A$) during printing, once carrying out predetermined angle rotation of the process unit further, it is desirable that it is made to perform the remaining printing. according to this desirable example — many — since the amount of toners of the toner supply means circumference is appropriately maintainable even if it is the case where continuation printing of several sheets is performed, gas supply pressure failure of a toner can be prevented. Moreover, in this case, it is desirable to reset accumulation number of sheets of an accumulation means at the same time it carries out predetermined angle rotation of the process unit. According to this desirable example, a reduction condition of a toner newly supplied around the toner supply means by rotation of a process unit can be supervised by accumulation number of sheets of a reset accumulation means. Moreover, it is desirable to enable it to set up a value of A or B freely in this case.

[0025] Moreover, the 1st configuration of a process unit concerning this invention A toner hopper with which it has a photo conductor and a development means at least, and is equipped possible [a rotation] in color picture formation equipment, and said development means collects toners while containing a toner, Toner support which moves the toner to said photo conductor while supporting a toner and rotating. It is the process unit which has at least a toner supply means to supply a toner to said toner support. Said development means is characterized by equipping a toner feed zone which it is near the contiguity section of said toner support and said toner supply means further with a toner maintenance means to always hold a toner of the specified quantity.

[0026] Moreover, the 2nd configuration of a process unit concerning this invention A toner hopper with which it has a photo conductor and a development means at least, and is equipped possible [a rotation] in color picture formation equipment, and said development means collects toners while containing a toner, Toner support which moves the toner to said photo conductor while supporting a toner and rotating. It is the process unit which has at least a toner supply means to supply a toner to said toner support. rotational motion — it is characterized by intercepting a part of opening which leads to a toner receipt room of said toner hopper from said toner feed zone so that a toner of a toner feed zone which it is near the contiguity section of said toner support and said supply means may not return to said toner hopper in appearance in the work.

[0027] Moreover, in the 2nd configuration of a process unit of said this invention, it is desirable that a toner maintenance wall is prepared in said toner hold wall so that a toner feed zone may be formed with the outer wall section and a toner hold wall of a toner hopper and a part of opening which leads to a toner receipt room of said toner hopper from said toner feed zone may be intercepted.

[0028]

[Embodiment of the Invention] Hereafter, this invention is explained still more concretely using the gestalt of operation.

[0029] Drawing 1 is the sectional side elevation showing the whole color electrophotography equipment configuration as color picture formation equipment in the gestalt of 1 operation of this invention.

[0030] As shown in [color electrophotography equipment whole configuration] drawing 1, 4 sets of this color electrophotography equipment whose cross sections for each colors of black, yellow, a Magenta, and cyanogen are sector image formation units in a center mostly of process-unit 1Bk(s), and 1Y, 1M and 1C are arranged, and the process-unit group is constituted by these process-unit 1Bk(s), and 1Y, 1M and 1C. Two or more process-unit 1Bk(s), and 1Y, 1M and 1C are arranged in the shape of a circular ring, and they are constituted so that it may rotate in one. Since process-unit 1Bk for each colors, and 1Y, 1M and 1C are constituted using the same configuration member, they have reliable composition to the alignment at the time of equipment assembly etc.

[0031] Process-unit 1Bk arranged in the shape of a circular ring, and 1Y, 1M and 1C are supported by the base material (not shown), and can be rotated in the direction of arrow head J around the cylinder-like shaft 32 by the migration motor 31 which is a migration means as a whole. each — process-unit 1Bk, and 1Y, 1M and 1C move to the image formation location 50 which is a location which countered some middle imprint belts 42 ****(ed) one by one by the rollers 43, 44, and 45 which a photo conductor 2 mentions later, and are positioned. This image formation location 50 is also an exposure location where the signal light 5 by which incidence was carried out exposes a photo conductor 2.

[0032] The laser aligner 33 generates the signal light 5 which is the laser beam modulated by the signal inputted into the printer section. In the condition which showed in drawing 1, this signal light 5 passes the optical path formed between process-unit 1Y for process-unit 1Bk(s) and the yellow for blacks, and it carries out incidence to the polarizing lens 34 and mirror 35 which were fixed to the interior of a shaft 32 through the transparent aperture by which the opening was carried out to some shafts 32. The signal light 5 which the direction was changed and was reflected by only 30 degrees of mirrors 35 is irradiated by the photo conductor 2 of process-unit 1Bk for blacks which is in the image formation location 50 through the aperture formed in the shaft 32. Thereby, a latent image is formed in the photo conductor 2 of process-unit 1Bk.

[0033] As shown in drawing 1, since the optical path from the laser aligner 33 to a mirror 35 is not what was formed along the space between the wall surfaces of process-unit 1Bk which carries out neighbors, and 1Y, and was formed specially, it has the composition that there is almost no unnecessary space in the occupancy space as a process-unit group. Moreover, since the polarizing lens 34 and the mirror 35 are formed in the space within the shaft 32 located in a part for the center section of a process-unit group, they do not interfere with the process-unit group which the polarizing lens 34 and mirror 35 which were fixed rotate, and its whole equipment configuration is simple.

[0034] In the color electrophotography equipment of the gestalt of this operation, a synthetic means to compound a color image for the toner image of each color in piles is constituted considering the middle imprint belt 42 as a center. The middle imprint belt 42 is constituted by the resin film which used as the base material the polycarbonate of half-conductivity (inside resistance) of the shape of an endless belt whose thickness is 100 micrometers. This middle imprint belt 42 is ****(ed) by the rollers 43, 44, and 45 made from stainless steel, and is movable in the direction of arrow head K of drawing 1.

[0035] In the gestalt of this operation, the perimeter of the middle imprint belt 42 is set up for a long time a little rather than the length (about 297mm) of the longitudinal direction of the form of A4 size, and rollers 43, 44, and 45 are arranged so that the middle imprint belt 42 may be ****(ed). As shown in drawing 1, the pressure welding of the portion located between a roller 43 and a roller 44 among the middle imprint belts 42 is lightly carried out to the photo conductor 2.

[0036] In the condition which shows in drawing 1, the voltage of +1kV is impressed to a roller 43 and a roller 44, and, thereby, the 1st imprint is performed to the middle imprint belt 42 from a photo conductor 2. The roller 45 in contact with the middle imprint belt 42 is grounded

electrically. The 2nd imprint roller 46 is arranged so that a roller 45 may be countered through the middle imprint belt 42. the urethane foam by which low resistance processing was performed to the surface constitutes this 2nd imprint roller 46 — having — the middle imprint belt 42 — receiving — a follower — it is pivotable. the bearing maintenance device of the 2nd imprint roller 46 — the middle imprint belt 42 — receiving — a follower — it is constituted so that it may be arranged at two conditions, the condition of having carried out the pressure welding lightly pivotable, and the condition of having separated and having shunted the middle imprint belt 42. The condition of having shunted in the location where the 2nd imprint roller 46 separated from the middle imprint belt 42 is shown in drawing 1 . It enables it to impress the voltage of abbreviation +700V to the shaft of this 2nd imprint roller 46.

[0037] The form conveyance way is formed in the nip section in which the middle imprint belt 42 and the 2nd imprint roller 46 carry out a pressure welding so that a form may be sent from the feed section 47.

[0038] Near the middle imprint belt 42, the belt-cleaner section 48 equipped with the cleaner brush 49 for cleaning the middle imprint belt 42 is formed. The cleaner brush 49 is constituted so that it may be arranged at two conditions in the condition of having estranged with the condition that the pressure welding was carried out to the middle imprint belt 42.

[0039] The fixing assembly 51 is arranged at the downstream of the form sent from the nip section of the middle imprint belt 42 and the 2nd imprint roller 46, and this fixing assembly 51 is fixed to the toner image on the form after an imprint.

[0040] [Configuration of process unit] drawing 2 is the cross section showing process-unit 1Bk for the blacks in the gestalt of 1 operation of this invention. Since it is constituted by the same member except for the toner contained by each, in order to simplify explanation, process-unit 1Bk for each colors in the gestalt of this operation, and 1Y, 1M and 1C explain only process-unit 1Bk for blacks, and omit the explanation about other process units 1Y, 1M, and 1C. In addition, in process-unit 1Bk for each colors, and 1Y, 1M and 1C, when it is necessary to give the same sign to the same portion and distinction of the configuration of each color needs to be attached, the alphabetic characters Bk (black), Y (yellow), M (Magenta), and C (cyanogen) which show each color will be given to a sign.

[0041] As shown in drawing 2 , in process-unit 1Bk, the cleaner section 19 is formed in the development section 30 and the bottom at the bottom.

[0042] Although the development section 30 in the gestalt of this operation is a configuration using the nonmagnetic 1 component developing-negatives method for developing negatives by making a photo conductor 2 carry out opposite contact of the elastic roller (developing roller 12) which is toner support, if it is a method of developing a xerography using the same configuration, the configuration of this invention can be used for it. For example, when using the same configuration as the gestalt of this operation in the magnetic brush developing-negatives method, the jumping developing-negatives method, etc., the configuration of this invention can be applied.

[0043] As shown in drawing 2 , in the toner hopper 7 of the development section 30, black toner 7Bk of nonmagnetic 1 component of the minus electrification nature which distributed black colors to the binder which used polyester resin as the base material is contained. The photo conductor 2 arranged between the development section 30 and the cleaner section 19 is an organic photo conductor, it uses a phthalocyanine for sensitive material and polycarbonate system binder resin is constituted as a subject. The corona-electrical-charging machine 3 is arranged near the photo conductor 2, and, thereby, the photo conductor 2 is charged in minus. The grid electrode 4 is formed in the corona-electrical-charging machine 3 so that it may counter with a photo conductor 2, and the electrification potential of a photo conductor 2 is controlled by this grid electrode 4.

[0044] In drawing 2 , the dashed line shows the laser beam which is the signal light 5. This laser beam advances into process-unit 1Bk from the exposure aperture 6 which is opening of process-unit 1Bk, and irradiates a photo conductor 2.

[0045] The surface is constituted by the silicone rubber which has elasticity, and the developing roller 12 arranged so that it may be lightly pressed by the photo conductor 2 is functioning as

toner support. A doctor blade 13 is a layer regulation means for regulating the amount of black toner 7Bk on a developing roller 12, and forming a thin layer. Polyurethane rubber with a thickness of 2mm is really cast at the tip of a stainless plate with a thickness of 0.15mm which has elasticity, and this doctor blade 13 is being fixed to the blade mount 17 by the screw stop. [0046] The pressure welding of the feed roller 14 is lightly carried out to the developing roller 12, and urethane foam is formed in the surface of a feed roller 14. This feed roller 14 functions on a developing roller 12 as a supply means to supply black toner 7Bk, from the toner hold room 10 mentioned later.

[0047] The toner hold room 10 for suspending black toner 7Bk near the feed roller 14 temporarily is formed in the development section 30. As shown in drawing 2, the toner hold room 10 is formed with outer wall section 7a of the toner hopper 7, and the toner hold wall 15, and opening 10a which leads to the toner receipt room of the toner hopper 7 is prepared in this toner hold room 10. Moreover, the toner maintenance wall 16 is formed in the toner hold wall 15 so that a part of opening 10a may be intercepted. As shown in drawing 2, the toner maintenance wall 16 is arranged among black toner 7Bk(s) of the toner hold room 10 so that black toner 7Bk of the feed zone S which it is near the contiguity section of a feed roller 14 and a developing roller 12 may be enclosed.

[0048] As mentioned above, since the toner maintenance wall 16 is formed in process-unit 1Bk of the gestalt of this operation, even if it is a time of not only when process-unit 1Bk being arranged in the posture location (image formation location) shown in drawing 2, but process-unit 1Bk being arranged by rotation at other postures, black toner 7Bk of a feed zone S will always be held.

[0049] The cleaner section 19 for cleaning black toner 7Bk which remained in the surface of the photo conductor 2 after an imprint is formed in the photo conductor 2 bottom of process-unit 1Bk in the image formation location shown in drawing 2. The cleaning blade 20 for failing to scratch black toner 7Bk on a photo conductor 2 is formed in the interior of the cleaner section 19.

[0050] In the gestalt of this operation, the diameter is 30mm and the photo conductor 2 is carried out as [rotate / by peripheral-speed 100 mm/s / in the direction of arrow head E]. Moreover, the diameter is 18mm and the developing roller 12 is carried out as [rotate / by peripheral-speed 160 mm/s / in the direction of arrow head F]. Furthermore, the diameter is 13mm and the feed roller 14 is carried out as [rotate / by peripheral-speed 75 mm/s / in the direction of arrow head G].

[0051] As drawing 2 shows the posture of process-unit 1Bk for blacks in an image formation location and shows it to drawing 2, the toner hopper 7 with which black toner 7Bk was contained is arranged at the photo conductor 2 bottom in the direction of a vertical, and the cleaner section 19 is arranged at the photo conductor 2 bottom in the direction of a vertical.

[0052] In the cleaner section 19, black toner 7Bk which failed to be scratched by the cleaning blade 20 is fallen and suspended for the pars basilaris ossis occipitalis of the cleaner section 19 with the self-weight.

[0053] As mentioned above, if process-unit 1Bk of the gestalt of this operation is used While being able to hold black toner 7Bk enough near the feed roller 14 in the posture condition of an image formation location, without preparing the delivery device and agitator style for moving black toner 7Bk to the interior of the toner hopper 7 It can prevent that black toner 7Bk of the feed zone S charged comparatively is returned to the toner receipt room of the toner hopper 7 by rotation of process-unit 1Bk.

[0054] Since other process units 1Y, 1M, and 1C have the same configuration, the same operation effect will be done so.

[0055] [Actuation of a process unit], next concrete actuation of the process unit of the gestalt of this operation constituted as mentioned above are explained.

[0056] First, a photo conductor 2 is rotated, the voltage of -5.5kV of corona-electrical-charging machines is impressed [3], and the surface of a photo conductor 2 is electrified. At this time, the applied voltage of a grid 4 is set as -500V, and the electrification potential of a photo conductor 2 is converged on -500V which are a fixed value.

[0057] Next, the signal light (laser beam) 5 is irradiated at the photo conductor 2 electrified as mentioned above, and an electrostatic latent image is formed. The exposure potential of the photo conductor at this time is -50V.

[0058] On the other hand, when a feed roller 14 and a developing roller 12 rotate in the development section 30, it is rubbed against the surface of a developing roller 12 while black toner 7Bk in the toner hold room 10 is charged in part according to an operation of a feed roller 14. He is trying for a feed roller 14 and a developing roller 12 to serve as this potential electrically at this time.

[0059] Timing is doubled with the portion by which electrification in the surface of a photo conductor 2 was started coming to a developing roller 12 and the location where it counters, and the direct current voltage of -150V is impressed to a developing roller 12. On a photo conductor 2, the laser beam which is the signal light 5 is irradiated, and the toner image which carried out NEGAPOJI reversal is formed only at the image section on the photo conductor 2 by which the pressure welding was carried out to the developing roller 12.

[0060] In drawing 2, return and a part of this black toner 7Bk are scratched by the feed roller 14 by the opposite portion with a feed roller 14, and black toner 7Bk which was not developed adhered to the developing roller 12 which rotates in the direction of arrow head F is returned in the toner hold room 10 at it. for this reason, a toner hold room — black toner 7Bk charged comparatively will be accumulated especially in the feed zone S in 10.

[0061] Of the above image formation actuation, the toner image of black is formed on a photo conductor 2. Same image formation actuation is performed also in other process units 1Y, 1M, and 1C.

[0062] [Color image formation actuation of color electrophotography equipment], next the actuation at the time of the color image formation in the color electrophotography equipment of the gestalt of this operation are explained.

[0063] the initial state of the color electrophotography equipment of the gestalt of this operation — setting — each — process-unit 1Bk, and 1Y, 1M and 1C are arranged in the location as shown in drawing 1. That is, process-unit 1Bk for blacks is arranged in the image formation location 50, and is in the condition that the photo conductor 2 of process-unit 1Bk countered some middle imprint belts 42. In this condition, incidence of the laser beam which is the signal light 5 for blacks is carried out into process-unit 1Bk from the laser aligner 33, and image formation by black toner 7Bk is performed to the middle imprint belt 42 by the photo conductor 2. In this case, when the black toner image is imprinted by the middle imprint belt 42 from the photo conductor 2 according to an operation of the voltage impressed to rollers 43 and 44, image formation to the middle imprint belt 42 is performed. Here, the speed of the middle imprint belt 42 is set up so that it may become almost the same as that of the speed (equal to the peripheral speed of a photo conductor 2) of the image formation of process-unit 1Bk.

[0064] Immediately after all the toner images of black were imprinted by the middle imprint belt 42, process-unit group 1Bk, and 1Y, 1M and 1C are driven on the migration motor 31, and rotate in the direction of arrow head J of drawing 1 in one. Process-unit group 1Bk, and 1Y, 1M and 1C stop, when 90 degrees rotates and process-unit 1Y arrives at the image formation location 50, and positioning of process-unit 1Y is performed.

[0065] Process-unit 1Y arrives at the image formation location 50, and as mentioned above, after being positioned, like process-unit 1Bk for the above-mentioned blacks, incidence of the laser beam modulated by the signal for yellow is carried out into process-unit 1Y, and the toner image of yellow is formed on a photo conductor, and is imprinted by the middle imprint belt 42. At this time, the middle imprint belt 42 is moving by one revolution, and the toner image of yellow is imprinted on the toner image of the black imprinted before. Here, the timing of the writing of the laser beam which is the signal light for yellow is controlled so that the toner image of black and the toner image of yellow agree in location.

[0066] Image formation actuation of the above yellow and same actuation are performed one by one also about a Magenta and cyanogen, and on the middle imprint belt 42, the toner image of four colors agrees in location, and it piles up. Thereby, a color image is formed. In addition, while the color image is formed on the middle imprint belt 42 in this way, the 2nd imprint roller 46 and

the cleaner brush 49 are estranged in the location which separated a few from the middle imprint belt 42 so that the toner image on the middle imprint belt 42 might not be disturbed, as shown in drawing 1 .

[0067] After the toner image of the last cyanogen is imprinted by the middle imprint belt 42, the middle imprint belt 42 continues moving at a speed as it is. The color image formed with the toner of four colors on the middle imprint belt 42 is imprinted by the form which doubles the color image and timing and is sent from the feed section 47. That is, according to the timing of the form sent from the feed section 47, the 2nd imprint roller 46 carries out the pressure welding of the form to the middle imprint belt 42, and thereby, the color image on the middle imprint belt 42 bundles up in a form, and is imprinted. And a fixing assembly 51 is fixed to the color image imprinted by the form. The form with which it was fixed to the color image is discharged out of equipment through the discharge roller 52.

[0068] The toner of the imprint remainder which remained on the middle imprint belt 42 is cleaned by the cleaner brush 49 which moved according to the timing after imprint actuation termination. The cleaner brush 49 will be in the condition that the pressure welding was carried out to the middle imprint belt 42 after imprint actuation termination. Thus, in the gestalt of this operation, with the cleaner brush 49, the middle imprint belt 42 is cleaned and it prepares for the next image formation actuation.

[0069] In the color electrophotography equipment of [an operation of a toner maintenance wall], next the gestalt of this operation constituted as mentioned above, an operation of the toner maintenance wall 16 by a process-unit group rotating in the direction (drawing 1) of arrow head J etc. is explained using drawing 3 . Drawing 3 is a cross section for explaining actuation of the process unit in the color electrophotography equipment of the gestalt of this operation.

[0070] Drawing 3 (1) shows the posture in case a process unit is in the image formation location 50. As shown in drawing 3 (1), the toner exists in each interior of the toner receipt room of the toner hopper 7, the toner hold room 10, and the cleaner section 19.

[0071] When a process-unit group rotates in the direction of arrow head J of drawing 1 as mentioned above, the posture of a process unit changes to the condition which shows in (2) of drawing 3 , (3), and (4) one by one. It changes to the condition that the self-weight also shows a toner to (2) of drawing 3 , (3), and (4) with posture change of such a process unit.

[0072] The toner suspended in the toner hold room 10 in the state of the image formation location 50 shown in drawing 3 (1) moves from the condition shown in drawing 3 (2) to the condition which shows in drawing 3 (3). Thus, although it follows on moving from the condition shown in drawing 3 (2) to the condition which shows in drawing 3 (3) and some toners in the toner hold room 10 are once returned to the toner receipt room in the toner hopper 7, the toner of a feed zone S becomes [being held with as at a feed zone S, and] according to an operation of the toner maintenance wall 16.

[0073] When a process-unit group furthermore rotates, as shown in drawing 3 (4), some toners of the toner receipt room in the toner hopper 7 enter the toner hold room 10 again. And when a process unit returns to the image formation location 50, the inside of the toner hold room 10 is filled with the toner of the proper amount shown in drawing 3 (1).

[0074] As mentioned above, while the toner with which the feed zone S was charged comparatively had been held for every one revolution of a process-unit group in the location, once other toners in the toner hold room 10 are returned to the toner receipt room in the toner hopper 7, some toners of the toner receipt room in the toner hopper 7 enter the toner hold room 10, and the toner hold room 10 is newly again filled with a toner.

[0075] As mentioned above, by establishing the toner maintenance wall 16 so that according to the color electrophotography equipment of the gestalt of this operation the toner hold room 10 may be established in a process unit and the toner of a feed zone S may be enclosed It can hold to a feed zone S, without returning the toner of a feed zone S charged comparatively during the rotation of a process unit at the toner receipt room in the toner hopper 7, permitting migration of the toner between the toner hold room 10 and the toner receipt room in the toner hopper 7. Therefore, also in a high-humidity/temperature environment, electrification of a toner is stabilized after several multi-sheet printing, and the beautiful image generated [fogging /

neither / concentration unevenness nor] is obtained.

[0076] [Map actuation at the time of monochrome mode], next the map actuation at the time of the monochrome mode in the color electrophotography equipment of the gestalt of this operation are explained using drawing 1 .

[0077] On the occasion of the map actuation at the time of monochrome mode, first, a process-unit group is rotated, it is made to move to the image formation location 50, and the process unit of a desired color is positioned. And like the case of the above-mentioned color map actuation, the toner image of a desired color is formed in a photo conductor 2, and the imprint to the middle imprint belt 42 is performed. In the map actuation at the time of monochrome mode, the middle imprint belt 42 moves continuously as it is after an imprint, and is imprinted by the form to which the toner image on the middle imprint belt 42 is sent from the feed section 47 by press actuation of the 2nd imprint roller 46. At this time, the 2nd imprint roller 46 will be in the condition of having carried out the pressure welding to the middle imprint belt 42, according to the timing which the tip of the toner image on the middle imprint belt 42 approaches.

[0078] In the color electrophotography equipment of the gestalt of [intermittent map actuation at the time of monochrome mode], next this implementation, the actuation in the case of outputting four images of black at a time intermittently is explained using drawing 1 and drawing 4 .

[0079] In this case, the 2nd imprint roller 46 and the cleaner brush 49 are maintained in the condition [that a pressure welding is carried out to the middle imprint belt 42, respectively].

[0080] First, it is judged whether it is image formation actuation in monochrome mode (S1 of drawing 4), and in not being image formation actuation in monochrome mode, the value of the counter (not shown) which is an accumulation means is reset, and it makes it "0" (S2 of drawing 4). On the other hand, when it is judged that image formation actuation in monochrome mode is performed next, it is judged whether the process unit for printing colors is in the image formation location 50 (S3 of drawing 4). and -- the case where there is no process unit for printing colors in the image formation location 50 -- the value of a counter -- resetting -- "0" -- carrying out (S4 of drawing 4) -- a process-unit group is rotated and the process unit for printing colors is positioned in the image formation location 50. On the other hand, when the process unit for printing colors is in the image formation location 50, printing is started as it is. It is in the image formation location 50, for example, process-unit 1Bk for blacks forms the toner image after the 2nd sheet continuously in the location as it is, after ending the image formation of the toner image of the 1st sheet. That is, the toner image after the 2nd sheet is imprinted after the middle imprint belt 42 top after the toner image of the 1st sheet was cleaned by the cleaner brush 49.

[0081] Thus, to the 4th sheet, an image is outputted and it stops. In addition, monochromatic output number of sheets is accumulated by the counter at this time. Supposing the initial value of the counter before printing is "0", the value of the counter in this case will be set to "4."

[0082] Then, printing of every four sheets is performed 7 times intermittently. The actuation to the 28th total is the same as the above-mentioned thing. In addition, the value of the counter after printing is "28."

[0083] In this condition, as shown in drawing 2 , that amount of collected on the toner hold room 10 in the process-unit 1 development section 30 of Bk black toner 7Bk has decreased by the image formation of 28 sheets.

[0084] Furthermore it continues and printing of four sheets is performed. After ending printing of four sheets by the actuation same at this time as the above-mentioned thing, 360 degrees of process-unit groups are rotated in the direction of arrow head J of drawing 1 , and once again, process-unit 1Bk for blacks is positioned in the image formation location 50, and it ends. The value of a counter is reset to coincidence and it is made it "0." For this reason, it will be in the condition that many new toners were collected at the toner hold room 10.

[0085] In addition, the value of a counter is reset, when monochrome printing of other colors was performed between monochrome printing, or also when printing of two or more colors is performed and a process-unit group rotates.

[0086] Although the case where monochrome printing of every four sheets was performed above continuously intermittently was mentioned as the example and explained, it is not related to

number of sheets. Moreover, when the accumulation value of a counter exceeds "30", after interrupting printing at the time, not rotating a process-unit group and the accumulation value of a counter ending printing first exceeding "30", a process-unit group is rotated. thus, the thing to do — few — it is in the middle of printing of several sheets, and without interrupting printing, the amount of toners in the hold room 10 can be maintained appropriately, and gas supply pressure failure can be prevented.

[0087] Moreover, it is judged whether the accumulation value of a counter reached during printing actuation at the predetermined value B (here, the predetermined value B is set as "50") (S5 of drawing 4). and by the time the accumulation value of a counter exceeds "30" and the accumulation value of a counter is further set to "50", in not ending printing When the accumulation value of a counter exceeds "50", even if it is in the middle of printing, printing actuation is once suspended (S6 of drawing 4). The remaining printing is performed, after resetting the value of a counter and making it "0" (S8 of drawing 4), while rotating a process-unit group (S7 of drawing 4) and positioning process-unit 1Bk for blacks in the image formation location 50 once again (S9 of drawing 4). For example, when the accumulation value of a counter was "28", 30-sheet continuation printing was carried out continuously, 22 sheets were printed and the accumulation value of a counter was set to "50", after once suspending printing actuation and rotating a process-unit group, the eight remaining sheets are printed. thus, the thing to do — many — since the amount of toners in the hold room 10 is appropriately maintainable even if it is the case where continuation printing of several sheets is performed, the gas supply pressure failure of a toner can be prevented. In addition, during printing actuation, when the accumulation value of a counter does not reach the predetermined value B, printing actuation is performed continuously.

[0088] Next, when it is judged whether printing is ended or not (S10 of drawing 4) and it ends printing, it is judged whether the accumulation value of a counter has turned into beyond the predetermined value A (here, the predetermined value A is set as "30") at the time (S11 of drawing 4). Printing is ended, after resetting the value of a counter and making it "0" (S13 of drawing 4), while rotating a process-unit group (S12 of drawing 4), when the accumulation value of a counter is judged to be more than "30." On the other hand, when the accumulation value of a counter is judged not to fulfill "30", printing is ended as it is.

[0089] As mentioned above, after the whole of the printing is completed, a process-unit group is made to once turn, when the accumulation number of sheets in monochrome mode is accumulated to a counter and the accumulation value of a counter exceeds the predetermined value A. Moreover, the remaining printing is performed, after once suspending printing actuation at the time and carrying out one revolution of process-unit groups, when the accumulation value of a counter turns into the predetermined value B (>A) before termination of the printing. thus, the thing to do — monochrome mode — setting — few — are in the middle of printing of several sheets, and printing is interrupted — there is nothing — moreover — many — when printing several sheets continuously intermittently, the toner of an amount always suitable in the toner hold room 10 is suspended, and supply of a toner does not become insufficient Moreover, it becomes possible to suppress rotation actuation of a process-unit group to the minimum.

[0090] In addition, it enables it to be suitably changed by the user side about the value of the set points A and B (>A). For example, in outputting many images with few black fields, such as an alphabetic character image, it sets it as A= 60 and B= 100, and when outputting many images with many black fields, such as a graphic form, to reverse, it can be set as A= 30 and B= 50 as mentioned above. By doing in this way, according to an output image, the amount of the toner in the toner hold room 10 can be maintained appropriately, and gas supply pressure failure can be prevented by rotation actuation of a necessary minimum process cartridge group.

[0091] Moreover, in the above, although the case where a process cartridge group was rotated after printing termination was mentioned as the example and explained, even if it makes it rotate a process cartridge group before printing initiation, the same effect can be acquired. Hereafter, this type "made to rotate a process cartridge group before printing initiation" of printing actuation is explained using drawing 1 and drawing 5 .

[0092] First, it is judged whether it is image formation actuation in monochrome mode (S21 of

drawing 5), and in not being image formation actuation in monochrome mode, the value of a counter is reset and it makes it "0" (S22 of drawing 5). On the other hand, when it is judged that image formation actuation in monochrome mode is performed next, it is judged whether the process unit for printing colors is in the image formation location 50 (S23 of drawing 5). And when there is no process unit for printing colors in the image formation location 50, the value of a counter is reset and it is made "0" (S24 of drawing 5). On the other hand, when the process unit for printing colors is in the image formation location 50, it is judged whether the accumulation value of a counter has turned into beyond the predetermined value A (here, the predetermined value A is set as "30") at the time (S25 of drawing 5). Printing is started, after resetting the value of a counter and making it "0" (S27 of drawing 5), while rotating a process-unit group (S26 of drawing 5), when the accumulation value of a counter is judged to be more than "30." On the other hand, when the accumulation value of a counter does not fulfill "30", printing is started as it is.

[0093] Moreover, it is judged whether the accumulation value of a counter reached during printing actuation at the predetermined value B (here, the predetermined value B is set as "50") (S28 of drawing 5). and by the time the accumulation value of a counter exceeds "30" and the accumulation value of a counter is further set to "50", in not ending printing When the accumulation value of a counter exceeds "50", even if it is in the middle of printing, printing actuation is once suspended (S29 of drawing 5). The remaining printing is performed, after resetting the value of a counter and making it "0" (S31 of drawing 5), while rotating a process-unit group (S30 of drawing 5) and positioning process-unit 1Bk for blacks in the image formation location 50 once again (S32 of drawing 5). In addition, during printing actuation, when the accumulation value of a counter does not reach the predetermined value B, printing actuation is performed continuously.

[0094] Next, in judging whether printing is ended or not (S33 of drawing 5) and ending printing, it ends printing as it is.

[0095] [A maintenance of color electrophotography equipment], next the maintenance in the color electrophotography equipment of the gestalt of this operation are explained using drawing 6 . Drawing 6 is the cross section showing the condition of having opened the actuation door and having pulled out process-unit 1C for cyanogen. Below, the maintenance in that case is explained supposing the case where the specific color, for example, the toner of cyanogen, is no longer consumed etc.

[0096] First, the migration motor 31 rotates a process-unit group by the command (based on the switch which is not illustrated) from an operator. And the process unit which should be maintained is moved to an up location (location of process-unit 1C of drawing 1). Next, as shown in drawing 4 , an operator opens the actuation door 460 of the upper part of an equipment main part wide, and takes out only the process unit which should be maintained out of equipment. Next, the same location is beforehand equipped with the corresponding adjusted new process unit for colors as a process unit. Thus, image formation can be continued similarly, without carrying out any adjustment after wearing of a new process unit, since the process unit of the same configuration was only exchanged.

[0097] In the color electrophotography equipment of the gestalt of this operation, since the process unit which should be exchanged is exchangeable in a different location from an image formation location, it is not interfered with it by related members, such as copy. Moreover, since the process unit in the condition of being exchangeable is not positioned, it can be easily taken out out of equipment. Therefore, the color electrophotography equipment of the gestalt of this operation is equipment excellent in maintenance nature.

[0098] In addition, in the gestalt of the above-mentioned implementation, although a photo conductor, a development means, and the cleaner section mentioned as the example the color electrophotography equipment of a configuration of rotating the process unit incorporated in one and explained it, this invention is not necessarily applied only to the color electrophotography equipment of this configuration. For example, it can have only a development means as a process unit, this invention can be applied to the color electrophotography equipment of a method rotated to the image formation location which counters one photo conductor which fixed

this development means, and the same effect can be done so.

[0099]

[Effect of the Invention] As explained above, according to this invention, the outstanding color picture formation equipment and the outstanding process unit which have neither concentration unevenness nor fogging after several multi-sheet printing are realizable under a high-humidity/temperature environment with an easy configuration. Moreover, according to this invention, in monochrome continuation printing, there is no futility of image output time amount, and the outstanding color picture formation equipment which can suppress the actuation for toner supply to the minimum can be realized.

[Translation done.]

* NOTICES *

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- 2.**** shows the word which can not be translated.
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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The sectional side elevation showing the whole color electrophotography equipment configuration as color picture formation equipment in the gestalt of 1 operation of this invention

[Drawing 2] The cross section showing the process unit for blacks in the gestalt of 1 operation of this invention

[Drawing 3] The cross section for explaining actuation of the process unit in the color electrophotography equipment of the gestalt of 1 operation of this invention

[Drawing 4] The flow chart which shows the intermittent map actuation at the time of monochrome Mohd of the color electrophotography equipment in the gestalt of 1 operation of this invention

[Drawing 5] The flow chart which shows other examples of the intermittent map actuation at the time of monochrome Mohd of the color electrophotography equipment in the gestalt of 1 operation of this invention

[Drawing 6] The cross section for explaining the actuation at the time of the maintenance of the color electrophotography equipment of the gestalt of 1 operation of this invention

[Drawing 7] The sectional side elevation showing the whole color electrophotography equipment configuration as color picture formation equipment in the conventional technology.

[Description of Notations]

1Bk Process unit for blacks

1Y The process unit for yellow

1M Process unit for Magentas

1C The process unit for cyanogen

2 Photo Conductor

10 Toner Hold Room

12 Developing Roller

13 Doctor Blade

14 Feed Roller

15 Toner Hold Wall

16 Toner Maintenance Wall

19 Cleaner Section

30 Development Section

33 Laser Aligner

42 Middle Imprint Belt

46 2nd Imprint Roller

[Translation done.]